

Parameter	Value	Unit
Initial concentration of $\text{H}_2\text{O}_2$	0.01	M
Initial concentration of $\text{Fe}^{2+}$	0.001	M
Initial concentration of $\text{H}^+$	0.1	M
Temperature	25	$^{\circ}\text{C}$
Reaction time	0-100	min
Reaction rate constant $k$	0.001	$\text{min}^{-1}$
Reaction order $n$	1	-
Half-life $t_{1/2}$	69.3	min
Activation energy $E_a$	40.0	$\text{kJ mol}^{-1}$
Pre-exponential factor $A$	1.0	$\text{min}^{-1}$
Reaction mechanism	First-order reaction	-
Rate of reaction	0.001	$\text{min}^{-1}$
Concentration of $\text{H}_2\text{O}_2$ at $t=0$	0.01	M
Concentration of $\text{H}_2\text{O}_2$ at $t=100$	0.005	M
Concentration of $\text{Fe}^{2+}$ at $t=0$	0.001	M
Concentration of $\text{Fe}^{2+}$ at $t=100$	0.0005	M
Concentration of $\text{H}^+$ at $t=0$	0.1	M
Concentration of $\text{H}^+$ at $t=100$	0.1	M
Reaction rate constant $k$ at $25^{\circ}\text{C}$	0.001	$\text{min}^{-1}$
Reaction rate constant $k$ at $30^{\circ}\text{C}$	0.002	$\text{min}^{-1}$
Reaction rate constant $k$ at $35^{\circ}\text{C}$	0.004	$\text{min}^{-1}$
Reaction rate constant $k$ at $40^{\circ}\text{C}$	0.008	$\text{min}^{-1}$
Reaction rate constant $k$ at $45^{\circ}\text{C}$	0.015	$\text{min}^{-1}$
Reaction rate constant $k$ at $50^{\circ}\text{C}$	0.03	$\text{min}^{-1}$
Reaction rate constant $k$ at $55^{\circ}\text{C}$	0.06	$\text{min}^{-1}$
Reaction rate constant $k$ at $60^{\circ}\text{C}$	0.12	$\text{min}^{-1}$
Reaction rate constant $k$ at $65^{\circ}\text{C}$	0.25	$\text{min}^{-1}$
Reaction rate constant $k$ at $70^{\circ}\text{C}$	0.5	$\text{min}^{-1}$
Reaction rate constant $k$ at $75^{\circ}\text{C}$	1.0	$\text{min}^{-1}$
Reaction rate constant $k$ at $80^{\circ}\text{C}$	2.0	$\text{min}^{-1}$
Reaction rate constant $k$ at $85^{\circ}\text{C}$	4.0	$\text{min}^{-1}$
Reaction rate constant $k$ at $90^{\circ}\text{C}$	8.0	$\text{min}^{-1}$
Reaction rate constant $k$ at $95^{\circ}\text{C}$	16.0	$\text{min}^{-1}$
Reaction rate constant $k$ at $100^{\circ}\text{C}$	32.0	$\text{min}^{-1}$
Reaction rate constant $k$ at $105^{\circ}\text{C}$	64.0	$\text{min}^{-1}$
Reaction rate constant $k$ at $110^{\circ}\text{C}$	128.0	$\text{min}^{-1}$
Reaction rate constant $k$ at $115^{\circ}\text{C}$	256.0	$\text{min}^{-1}$
Reaction rate constant $k$ at $120^{\circ}\text{C}$	512.0	$\text{min}^{-1}$
Reaction rate constant $k$ at $125^{\circ}\text{C}$	1024.0	$\text{min}^{-1}$
Reaction rate constant $k$ at $130^{\circ}\text{C}$	2048.0	$\text{min}^{-1}$
Reaction rate constant $k$ at $135^{\circ}\text{C}$	4096.0	$\text{min}^{-1}$
Reaction rate constant $k$ at $140^{\circ}\text{C}$	8192.0	$\text{min}^{-1}$
Reaction rate constant $k$ at $145^{\circ}\text{C}$	16384.0	$\text{min}^{-1}$
Reaction rate constant $k$ at $150^{\circ}\text{C}$	32768.0	$\text{min}^{-1}$
Reaction rate constant $k$ at $155^{\circ}\text{C}$	65536.0	$\text{min}^{-1}$
Reaction rate constant $k$ at $160^{\circ}\text{C}$	131072.0	$\text{min}^{-1}$
Reaction rate constant $k$ at $165^{\circ}\text{C}$	262144.0	$\text{min}^{-1}$
Reaction rate constant $k$ at $170^{\circ}\text{C}$	524288.0	$\text{min}^{-1}$
Reaction rate constant $k$ at $175^{\circ}\text{C}$	1048576.0	$\text{min}^{-1}$
Reaction rate constant $k$ at $180^{\circ}\text{C}$	2097152.0	$\text{min}^{-1}$
Reaction rate constant $k$ at $185^{\circ}\text{C}$	4194304.0	$\text{min}^{-1}$
Reaction rate constant $k$ at $190^{\circ}\text{C}$	8388608.0	$\text{min}^{-1}$
Reaction rate constant $k$ at $195^{\circ}\text{C}$	16777216.0	$\text{min}^{-1}$
Reaction rate constant $k$ at $200^{\circ}\text{C}$	33554432.0	$\text{min}^{-1}$
Reaction rate constant $k$ at $205^{\circ}\text{C}$	67108864.0	$\text{min}^{-1}$
Reaction rate constant $k$ at $210^{\circ}\text{C}$	134217728.0	$\text{min}^{-1}$
Reaction rate constant $k$ at $215^{\circ}\text{C}$	268435456.0	$\text{min}^{-1}$
Reaction rate constant $k$ at $220^{\circ}\text{C}$	536870912.0	$\text{min}^{-1}$
Reaction rate constant $k$ at $225^{\circ}\text{C}$	1073741824.0	$\text{min}^{-1}$
Reaction rate constant $k$ at $230^{\circ}\text{C}$	2147483648.0	$\text{min}^{-1}$
Reaction rate constant $k$ at $235^{\circ}\text{C}$	4294967296.0	$\text{min}^{-1}$
Reaction rate constant $k$ at $240^{\circ}\text{C}$	8589934592.0	$\text{min}^{-1}$
Reaction rate constant $k$ at $245^{\circ}\text{C}$	17179869184.0	$\text{min}^{-1}$
Reaction rate constant $k$ at $250^{\circ}\text{C}$	34359738368.0	$\text{min}^{-1}$
Reaction rate constant $k$ at $255^{\circ}\text{C}$	68719476736.0	$\text{min}^{-1}$
Reaction rate constant $k$ at $260^{\circ}\text{C}$	137438953472.0	$\text{min}^{-1}$
Reaction rate constant <		

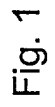
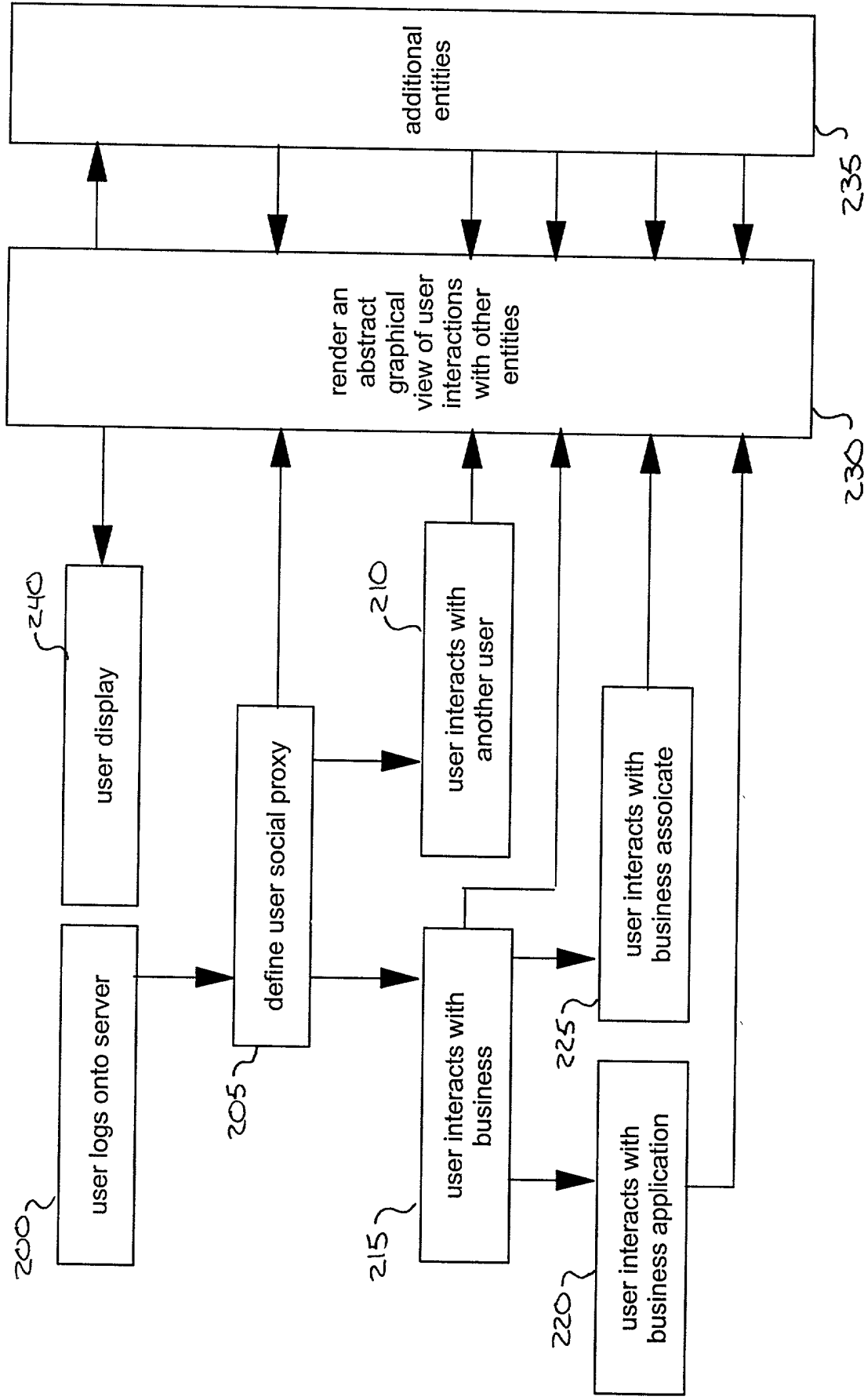


Fig. 1



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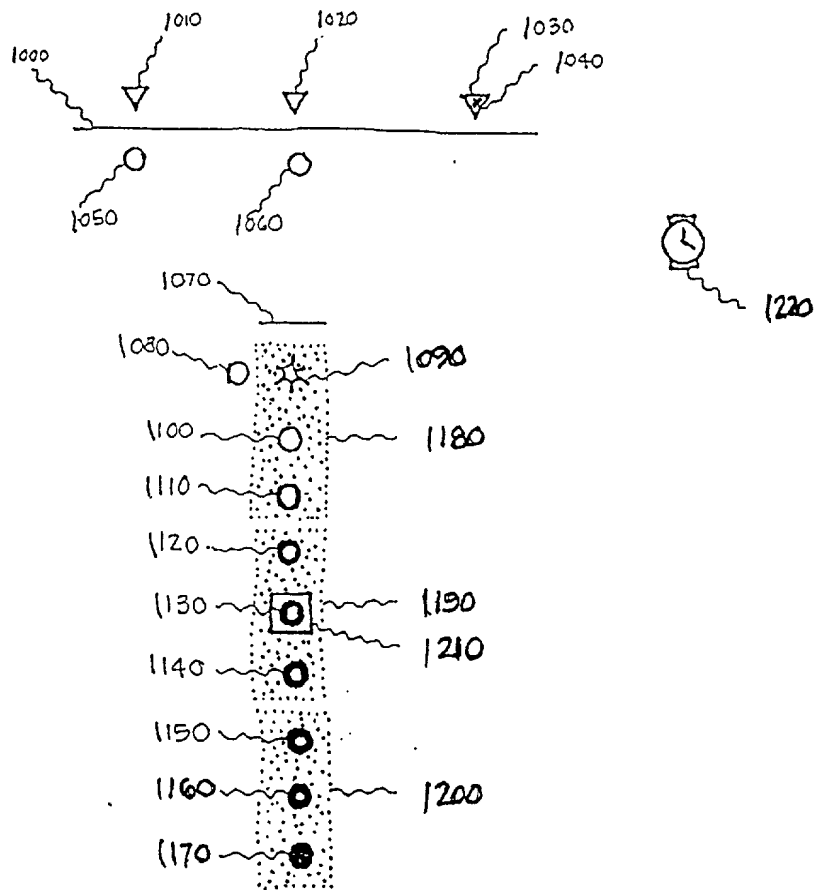
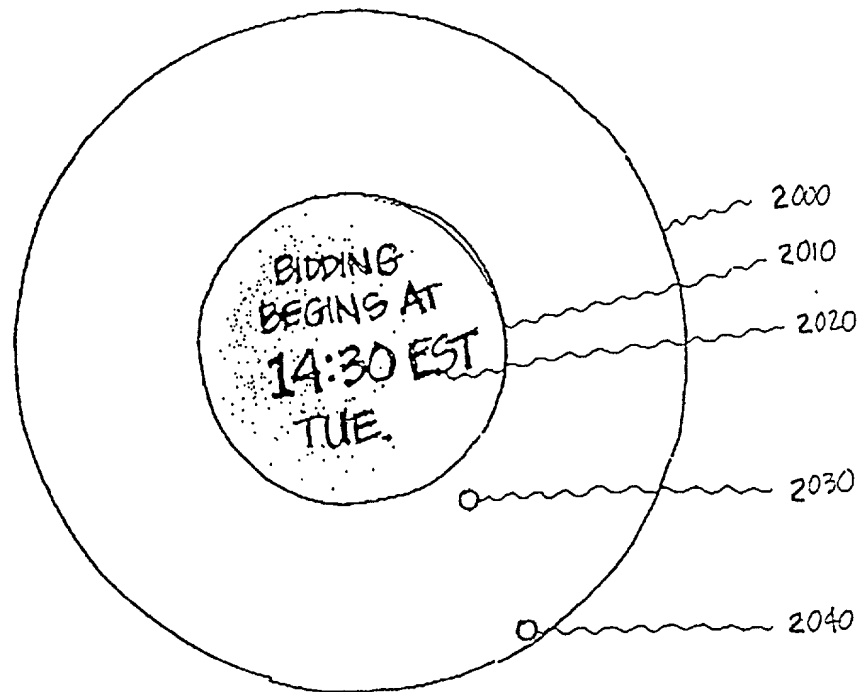


Fig. 3

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Fig. 4